

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>PU4754W0</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 03/ 20094</b>	International filing date (day/month/year) <b>25/06/2003</b>	(Earliest) Priority Date (day/month/year) <b>27/06/2002</b>
Applicant <b>SMITHKLINE BEECHAM CORPORATION</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**PREPARATION OF STEREOISOMERS OF (3ALPHA, 3ALPHA/BETA, 6ALPHA/BETA) HEXAHYDROFURAN-2,3-B: FURAN-3-OL**

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

Form PCT/ISA/210 (first sheet) (July 1998)

## INTERNATIONAL SEARCH REPORT

 Internal Classification No  
 PCT/US 20094

 A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 C07D307/26 C07D493/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

 Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	WO 03 024974 A (DOAN BRIAN DANIEL ;LOVELACE THOMAS CLAIBORNE (US); SMITHKLINE BEEC) 27 March 2003 (2003-03-27) page 7; examples ---	1-21
P,A	WO 03 022853 A (KESTELEYN BART RUDOLF ROMANIE ;SURLERAUX DOMINIQUE LOUIS NEST (BE)) 20 March 2003 (2003-03-20) page 11; claims ---	1-21
P,A	WO 02 060905 A (GLAXO GROUP LTD ;DAVIS ROMAN (US); LOVELACE THOMAS CLAIRBORNE (US)) 8 August 2002 (2002-08-08) page 10 --- -/--	1-21

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

17 October 2003

Date of mailing of the international search report

29/10/2003

Name and mailing address of the ISA

 European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 91 651 epo nl  
 Fax: (+31-70) 340-3016

Authorized officer

Fazzi, R

## INTERNATIONAL SEARCH REPORT

Internat Application No  
PCT/US 0094

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>MAYER S ET AL: "Synthesis of Perhydro-Furo'2,3-b!Pyran (and Furan)-3-yl Methanols by Oxygenative Radical Cyclization" TETRAHEDRON, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 54, no. 30, 23 July 1998 (1998-07-23), pages 8753-8770, XP004124043 ISSN: 0040-4020 the whole document</p>	1-21
A	<p>GHOSH A K ET AL: "Nonpeptidal P2 Ligands for HIV Protease Inhibitors: Structure-Based Design, Synthesis, and Biological Evaluation" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, US, vol. 39, no. 17, 1996, pages 3278-3290, XP002241908 ISSN: 0022-2623 cited in the application page 3279 -page 3280</p>	1-21
A	<p>UCHIYAMA M ET AL: "Stereoselective synthesis of optically active perhydrofuro'2,3-b!furan derivatives" TETRAHEDRON LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 42, no. 28, 9 July 2001 (2001-07-09), pages 4653-4656, XP004245771 ISSN: 0040-4039 the whole document</p>	1-21
A	<p>GHOSH A K ET AL: "Synthesis and optical resolution of high affinity P2-ligands for HIV-1 protease inhibitors" TETRAHEDRON LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 36, no. 4, 23 January 1995 (1995-01-23), pages 505-508, XP004028779 ISSN: 0040-4039 page 507</p>	1-21

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

page 2 of 2

## INTERNATIONAL SEARCH REPORT

Information on patent family members

Internal Application No  
PCT/US 0094

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03024974	A	27-03-2003	WO 03024974 A2	27-03-2003
WO 03022853	A	20-03-2003	WO 03022853 A1	20-03-2003
WO 02060905	A	08-08-2002	WO 02060905 A2	08-08-2002
			WO 02067239 A2	29-08-2002

Form PCT/ISA/210 (patent family annex) (July 1992)

Express Mail Label No.  
EV 332063795 US

Best Available Copy